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THE FEMALE PERINEUM.

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NO medical man, who practices Obstetrics or Gynæcology, can do so satisfactorily to himself, unless he fully appreciates the importance of the Perineum and its relations. He must first of all clearly master and comprehend its anatomy; and yet, as a matter of fact, until quite recently there was not a work upon Anatomy in the English language which described the anatomy of the perineum with sufficient accuracy, so as to make it intelligently and practically understood, in all its relations and topography, by the obstetrist and gynæcologist;—in other words, its surgical anatomy was imperfectly treated. An exact and definite knowledge of the anatomy of the perineum is absolutely necessary in order to understand quite a number of complaints which the general practitioner meets with in his daily rounds; but unfortunately practitioners have not given the subject the attention which its importance demands.

The perineum is the space between the anus and the posterior commissure of the vulva, or the space between the backward curve of the rectum and the forward curve of the vagina, and is composed of fascia, areolar tissue and a fibro-elastic tissue, with blood-vessels; it being really a union of tendons and muscles which finally coalesce.

Beginning at a point less than two inches above the margin of the perineum, the vagina and rectum, which above this point are in proximity to each other, begin to diverge, the vagina naturally curving forwards and the rectum curving backwards. This minor fact in the topography of the rectum should not be forgotten or

underrated, for, without its full appreciation, the peculiar shape and form of the perineum cannot be understood. The space between the rectum and the vagin is *wedge-shaped*, and is described by Henle as a *Körper* or body, and is now called by gynæcologists the *perineal body*. This perineal body is triangular-shaped, and is bounded on its external face by the plane ordinariiy denominated the perineum proper. This is the space externally from the anus to the posterior commissure of the vagina, and when the female is in the erect position, it may be considered as the lower side of the triangle; on the front side, the triangle is bounded by the posterior wall of the vagina, and on the rear it is bounded by the anterior wall of the rectum. Now this triangle (or what is contained within its boundaries , is the whole perineum; and, once more we repeat, it is what the German anatomists and modern gynæcologists call the *perineal body*, and at a distance less than two inches above the anus and commissure of the vagina, comes to a point where, as above described, the rectum and vagina are in proximity. But it can be easily understood, as we approach the outlet of either of these, that the distance becomes greater.

This perineum—which, with Henle, we call the perineal body —sustains the anterior wall of the rectum and prevents it from prolapsing ; and *secondly*, by supporting the posterior vaginal wall, prevents it also from prolapsing. *Thirdly*, when the perineum is intact, the walls of the vagina are in apposition, so that the anterior wall rests upon the posterior wall, the bladder resting upon the anterior wall, and against the bladder the uterus— all of which are supported by the perineum. Lastly, Dr. Thomas says, " the perineum preserves a proper line of projection of the contents of the bladder and rectum, and thus prevents the occurrence of tenesmus, a frequent cause of displacements."

Dr. Thomas designates the perineal body as the " keystone of an arch," although it should be remembered that it is an inverted keystone. Now, take away this keystone (triangle), or split it, and we can readily conceive the result! A lacerated perineum is nothing more than a *splitting of this triangle* or perineal body, and an operation for a ruptured perineum is nothing more than first vivifying these torn surfaces, and then bringing them together so as to admit of accurate coaptation, and holding them in their original normal position with sutures properly applied. A perineum lacerated ever so little will be liable to affect the health of any woman. Dr. Emmet, in speaking of the importance of all, even the smallest, injuries of the perineum, uses the following language:

" *A laceration of the perineum is sometimes accompanied by a general irritability, which cannot be traced to any other cause, and*

is only relieved when it is restored. I know of several instances in which the existence of scars in the perineum had so much effect upon the nervous system as to entirely change the disposition of the woman; and yet they were not conscious of any local difficulty."

The perineum holds a very important relation with that change in the uterus which must normally go on after labor,—we refer to *involution*. Anything which interferes with the process of involution may be of itself an important factor in the cause of disease; and no woman can enjoy good health after parturition, unless the process of involution is complete, and accompanied by a retrograde metamorphosis of tissue, and a diminution which shall reduce the uterus to nearly its pristine size before conception. During pregnancy, the perineum, as well as the vulva and vagina, becomes hypertrophied, and its tissue much increased; and, after labor, not only the uterus, but likewise the perineum and vagina, undergo involution. These are important facts, and are the key to many complaints which come under the observation of the gynæcologist; and if the practitioner fully appreciates this, he will be prepared to treat rationally many cases of disease, and will have a clear idea in his mind of the pathology of the same.

Whenever the practitioner takes a new case under treatment, of a parous woman who consults him for some uterine affection, he should make a physical examination of the uterus, to find out its condition and the condition of the reproductive organs. Upon a digital examination, if he finds the uterus enlarged, showing subinvolution, he should forthwith search for the cause of the same, and if it is possible to find it, he should seek to remove the cause; and then the process of involution may set up again and be normally completed.

The perineum, when not ruptured—as likewise the vagina,—may be in an atonic and relaxed condition, and seriously affect the health of the patient, the whole difficulty arising from defective involution. That such a condition exists, involving the vagina and perineum, may perhaps be overlooked, and not be properly regarded by some practitioners. However, if the physiology and pathology of the perineum and vagina, as evinced by their condition after labor, are carefully studied, defective involution affecting them will be found to be an ailment of very frequent occurrence. Now, if after labor it is possible to have a feeble, atonic and relaxed condition of the perineum without rupture, what may not be expected when the perineal body is rent?

When a woman has a complete rupture of the perineum, so that the rectum and vagina for an inch or two above the anus are reduced to one canal, the consequences of this are apparent to the patient

herself, as well as to any medical man whom she calls upon to attend her. But in this connection let me call attention to the fact, that *every portion of the tissue of the perineum which is destroyed, weakens its reliability*. I will take occasion to name a few ailments and complaints which are liable to set in as the direct results of rupture of the perineum:—

Prolapsus of the vaginal and rectal walls (cystocele and rectocele), prolapsus, retroflexion and retroversion of the uterus, catarrh of the uterus, leucorrhœa, endometritis, subinvolution, chronic cystitis, pruritus vulvæ, headaches, hysteria, neurasthenia, neuralgic conditions, and a host of nervous disturbances and other neuroses, the result of reflex nervous irritation; last and not least, septicæmia. Laceration of the perineum, one great factor in preventing normal involution, is not the only cause of this condition; another traumatic leision is to be mentioned, which is laceration of the cervix—something relatively as important as the former; and really, until within the past ten years, its diagnosis and pathology was quite unknown by the profession. I deem it proper to make this mention regarding laceration of the cervix, because its diagnosis is more difficult than laceration of the perineum; but when once diagnosticated, its surgical treatment is even safer, and, numerically speaking, more successful than operations for the restoration of extensive ruptures of the perineum.

One object of this paper is to call the attention of practitioners of midwifery to the importance of *always examining ocularly the condition of the perineum after every labor*, and of closing immediately, by surgical means, any rupture that may be found to exist. I repeat, the rupture should be closed by surgical means, because, although a slight rupture of the perineum usually heals by the powers of nature, yet the union is not by *first intention*, and its existence always renders the convalescence of the patient tedious, so that she will be liable to have a protracted confinement, and her getting up will be slow and tedious. In addition to this, she will be more liable to have septic puerperal processes set in—perhaps septicæmia,—all of which may be avoided and prevented by properly closing the rupture with sutures immediately after delivery.

In a practical point of view, it is best to classify perineal ruptures; and some authorities confine them to three varieties:—a simple or slight laceration, a central laceration, and a complete laceration, involving the sphincters;—but we prefer the following:

I. Superficial rupture of the fourchette, involving the perineum for not more than about one inch.

II. Perineum ruptured to about the centre, or central rupture.

III. Rupture to the sphincter ani.

IV. Rupture through the sphincter, involving the recto-vaginal septum and extending up to the anus; this is the complete rupture.

Either variety, except the first, may cause a good deal of trouble if left to nature; the first may heal—not by first intention, but by second intention,—by granulation, and the formation of more or less cicatricial surfaces and scars at the seat of the rupture.

Experience has proven it to be far better, far safer, more salutary and satisfactory to the patient, for the accoucheur to bring the parts together, so that they may be in condition to heal *prima intentione.*

Let the general practitioner bear in mind, "that it is no exaggeration to say that a very large proportion of female diseases take their origin in the mismanagement of the lying-in chamber." (Thomas). I have had occasion, for twenty years past, to see this statement verified.

We give the following advice: *Let no practitioner be too modest to satisfy himself, after every case of labor which he attends, in a primipara or a multipara, whether or not rupture exists.* If he finds this to be the case, he should at once place the woman upon her left side, with her hips at the edge of the bed, and (if at night) taking a candle in his hands, with the aid of the nurse, carefully examine the parts, and if necessary separate the lips of the vagina to see the extent of the fissure. If it is a case of rupture of the first variety, the parts should be brought together, and closed by applying *serre-fines*, or Hoff's automatic sutures. These little expedients can be always carried in the pocket-case of the obstetrist, and can be used at night, (especially convenient in country practice), and without any assistant except the nurse.

Sometimes the vagina is ruptured high up, and the perineum itself seemingly not torn. In such a case it is best to introduce separate vaginal sutures of Chinese silkworm gut, beginning at the *upper end* of the rent and descending to the perineal body. In case there is a rupture after introducing the sutures, a cushion or pillow should be applied between the knees, and they tied together, and the patient is to lie on her side for some six days, when the sutures may be removed. If necessary, the urine should be drawn by an elastic catheter twice daily. If the patient can pass water without the aid of the catheter, her nurse should after each micturation carefully inject the vagina with a solution of the permanganate of potash, Listerine, or carbolized water.

In more extensive lacerations, of the second or third variety, the treatment to be pursued is the application of sutures of either silver wire or silkworm gut. In my latest operations I have generall

adopted the last, and to the young practitioner we particularly recommend it, as it may be more readily and easily inserted than silver wire. Bantock, of London, uses the silkworm gut altogether, and we know of no other operator who has been so successful,—and he is of undoubted authority.

In the fourth variety, it may be advisable to insert rectal sutures (and here we always use the silkworm gut, or the finest carbolized Chinese silk), and bring the ends of the sphincter together; and at a later period (say four or five weeks), operate upon the perineum.

The experience of the writer of this goes to show, that it is far better to close a ruptured perineum directly after labor, than to wait for some months until the patient recovers from her confinement. The only case of failure, in a large number of operations made directly after labor, was in one single instance, where a lady, in a previous labor, had a perineal rupture and laceration of the cervix, both of which had been previously operated upon by another practitioner. In this instance, I attended her in her second labor, but when the head was born the perineum again was lacerated. Four hours after the delivery, I closed the rupture, using four silver-wire sutures, but the operation was not a success, probably because the patient suffered from a long confinement and from an attack of puerperal fever. As a general rule, the most experienced obstetrists unite in saying that the immediate operation is a success, and in these cases the failure of the perineum to unite by *first intention* is an exception to the rule.

I will not enter into a detailed description of the manner of performing the operation, as this can be studied in the works of Goodell, Thomas, Emmet, Bantock, Schroeder and Ludlam. It is, however, a matter of surprise that the operation of Lawson Tait is never mentioned by any of our countrymen. This operation was first described in the London *Obstetrical Transactions*, Vol. xxi, p. 296, and is also mentioned in Dr. Edis' new English work upon Diseases of women, p. 445. It is founded upon the principle, 1st that in making the vivification, no tissue is entirely removed; 2d, in case of rupture through the sphincter and rectum up from anus, *a flap is to be turned backwards* from the edge of the rent into the rectum; and, 3d, if the operation does not succeed, the patient is left no worse than before the operation. In a case at Chicago, Oct., 1881, operated upon by Prof. Dr. R. Ludlam, (in which the writer of this had the pleasure of assisting), the method of Dr. Lawson Tait was tried. It was a case of thirty years' standing, a complete rupture, involving both sphincters, and the operation proved a complete success. We think the

operations of Lawson Tait, and of the late Prof. Simon,* need to be studied more attentively.

I cannot close this article without stating that operations for lacerations of the last variety are exceedingly difficult, and need the co-operation of skilled assistants; and what is more, *even in the most skillful hands, they are frequently a failure.* Unless you have the assistance of a trained, experienced and reliable nurse, more than half the cases will be failures. The trouble is with the bowels; if the woman strains when defecating, the sutures will break through, and the operation is a failure. Only an experienced nurse can properly assist her in preventing this. Formerly, in these operations, the bowels were locked up by opium until the 7th day; now, this is all changed, and we give them proper food, so as to keep the bowels in a relaxed, or at least in a *soluble* condition.

It may not be inappropriate to state, in this connection, that rupture of the perineum is of *frequent occurrence*, and that it is often overlooked and its existence unknown, because practitioners of midwifery have not been in the habit of examining their patients by *ocular inspection* after the completion of labor. In this paper, (not without reason), we have insisted upon the necessity of a "new departure" in this practice. In the Cincinnati City Hospital,† for the years of 1878 and 1879, in the lying-in wards, the internes have been directed to *examine every case ocularly* after delivery; and as a result of one hundred and forty-two labors which were primiparæ, and fifty-nine among the multiparæ, there were seventy-five cases of rup ure of the perineum among the primiparæ, and five among the multiparæ. This was about 37 per cent. of the whole; 50 per cent. of the primiparæ, and 8 per cent. of the multiparæ. This proportion of perineal ruptures is about a fair average of hospital practice, but private practice may perhaps show a less per cent. Of course, in most cases they were of the *first variety*, but nevertheless the percentage is sufficiently large to require the careful attention of the obstetrist to such accidents.

The obstetric surgeon has a great responsibility, and his motto should be to prevent accidents if possible; but he must also commit no sins of omission. If he does not repair his accidents, in the light of the most recent advances in surgery, he will not stand blameless; for he should only once reflect upon the consequences and untold sufferings that a poor woman has to endure, who has a ruptured perineum. Gynæcology, certainly, in the future has a great mission,

* See Schroeder's "Diseases of the Female Sexual Organs," edited by Von Ziemssen, p. 556.

† "The Obstetrical Gazette," May, 1880, page 551.

and let every practitioner carefully study the methods which the surgeons of our day have made known and worked out successfully only by the most diligent labor and study. Medicine is both a science and an art.